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UNITED STATES DEPARTMENT OF AGRICULTURE
Food Distribution Administration

U. S. STANDARDS FOR CARROTS FOR PROCESSING
(Effective January 17, 1944)

INTRODUCTION

The accompanying grades for carrots are intended to facilitate transactions between growers and processors who may wish to use a purchasing system based upon the quality of carrots delivered. These grades are an outgrowth of the widely accepted principle that price should be directly proportional to quality. The grower who delivers high quality carrots deserves a premium price because such carrots enable the processor to pack a better quality finished product.

In the application of these standards it is assumed that in most instances sellers will not sort their carrots into separate lots of U. S. No. 1 and U. S. No. 2 grades before delivery to the buyer, and that the buyer will pay a certain price for the percentage of each grade in the lot as determined by inspection. Upon delivery, the inspector will simply sort representative samples taken from each lot, and determine the percentage of each grade. Final settlement would then be made by applying the percentage of each grade to the total weight of the lot, and then applying the contract prices established for each grade. Under such a procedure, there is no need for tolerances.

It will be noted, however, that the standards provide tolerances but these apply only when a grower or shipper has actually sorted his carrots into separate lots of U. S. No. 1 or U. S. No. 2 grades before delivery to the buyer.

GRADES

U. S. No. 1 shall consist of carrots of similar varietal characteristics (1) which are firm (2), fairly well colored (3), fairly well formed (4), fairly smooth (5), and not woody (6); free from soft rot, callus material (7), and free from damage (8) caused by growth cracks, sunburn, green cores, pithy cores, watercore, internal discoloration, oil spray, freezing, dry rot, other disease, insects, mechanical or other means. (See Topping Requirements and Size)

U. S. No. 2 shall consist of carrots of similar varietal characteristics (1) which are firm (2), fairly well colored (3), not badly misshapen (9), excessively rough (10), or woody (6); free from soft rot, cull material (7), and free from serious damage (11) by any cause. (See Topping Requirements and Size)

Culls shall consist of carrots which fail to meet the requirements of either of the foregoing grades and size specifications.

Cull material. (See definition No. 7)

TOPPING REQUIREMENTS

Unless otherwise specified, tops or sprouts shall be cut, snapped, or twisted off to within three-fourths inch of the crown of the root. In making grade determinations, all portions of leafstems or sprouts over three-fourths inch long, or any other specified length, shall be removed from the roots and scored as cull material.

SIZE

Unless otherwise specified, the minimum length shall be not less than 3 inches.

The minimum and maximum diameters for U. S. No. 1 and U. S. No. 2 grades may be fixed by agreement between the buyer and the seller. "Diameter" means the greatest dimension of the root taken at right angles to the longitudinal axis. Roots which fail to meet the size specifications shall be considered as "Culls."

TOLERANCES

In the application of these standards, it is assumed that in most instances sellers will not sort their carrots into separate lots of U. S. No. 1 and U. S. No. 2 grades before delivery to the buyer. In such cases, there is no need for tolerances. If the contract between the buyer and the seller calls for the delivery of lots containing only one grade, such as U. S. No. 1 or U. S. No. 2, then unless otherwise specified, a tolerance of 10 percent shall be allowed for carrots which fail to meet the requirements of the grade, other than for size and cull material, but not more than three-tenths of this amount, or 3 percent, shall be allowed.

for carrots affected by soft rot, but not more than one-third of this amount, or 1 percent, shall be allowed for carrots which are seriously damaged by soft rot. In addition, not more than 2 percent, by weight, shall be allowed for cull material. An additional tolerance of 10 percent shall be allowed for carrots which fail to meet the specified size requirements but not more than one-half of this amount, or 5 percent, shall be allowed for carrots which are below the specified minimum diameter or length.

DEFINITIONS OF TERMS

As used in these Standards:

1. "Similar varietal characteristics" means that the carrots are of the same general type.
2. "Firm" means that the carrot is not soft, flabby, or shriveled.
3. "Fairly well colored" means that the outside and inside color of the carrot is orange, orange red, or orange scarlet but not a pale orange or distinct yellow color.
4. "Fairly well formed" means that the carrot is not forked, or materially crooked, or otherwise misshapen, to the extent that, in the ordinary process of trimming, a loss of over 5 percent, by weight, of the root is incurred in excess of that which would occur if the root were perfect.
5. "Fairly smooth" means that the carrot is not rough, ridged, or covered with secondary rootlets, to the extent that, in the ordinary process of trimming, a loss of over 5 percent, by weight, of the root is incurred in excess of that which would occur if the root were perfect.
6. "Woody" means that the flesh of the carrot is tough and fibrous.
7. "Cull material" means pieces of carrots, loose tops and portions of attached tops and sprouts in excess of the specified length, loose dirt, adhering caked dirt, weeds or other foreign matter. Carrots with adhering caked dirt, and tops or sprouts which are longer

than the specified length, shall not be scored against U. S. No. 1 or U. S. No. 2 grades, but such dirt, and such portions of tops and sprouts which are longer than the specified length, shall be removed from the roots and scored as cull material.

8. "Damage" means any injury or defect which materially affects the processing quality; or which cannot be removed in the ordinary process of trimming without a waste of more than 5 percent, by weight, in excess of that which would occur if the root were perfect.

9. "Badly misshapen" means that the carrot is forked or misshapen to the extent that, in the ordinary process of trimming, a loss of over 25 percent, by weight, of the root is incurred in excess of that which would occur if the root were perfect.

10. "Excessively rough" means that the carrot is so rough or ridged that, in the ordinary process of trimming, a loss of over 25 percent, by weight, of the root is incurred in excess of that which would occur if the root were perfect.

11. "Serious damage" means any injury or defect which seriously affects the processing quality; or which cannot be removed in the ordinary process of trimming without a loss of more than 25 percent, by weight, in excess of that which would occur if the root were perfect.

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